This priority letter Airworthiness Directive (AD) is prompted by an accident involving a Model SA330 helicopter that occurred on October 21, 1997, which was a result of loss of the tail rotor drive. An investigation determined that the loss of the tail rotor drive was caused by excess play between the tail rotor gearbox bevel gear and the bevel wheel. This condition, if not corrected, could result in failure of the tail rotor gearbox, resulting in loss of tail rotor drive and subsequent loss of control of the helicopter.

The Direction Generale De L'Aviation Civile (DGAC) which is the airworthiness authority for France, recently notified the FAA that an unsafe condition may exist on Eurocopter France Model AS332C, L, and L1 and Model SA330F, G, and J helicopters. The DGAC advises that a procedure to determine the angular play of the tail rotor gearbox must be performed within 25 flying hours, and then repeated at certain intervals. The DGAC issued AD 97-322-067(AB) and AD 97-323-079(AB), both dated November 19, 1997, applicable to Eurocopter France Model AS332C, L, and L1 helicopters, and Model SA330F, G and J helicopters, respectively.

These helicopter models are manufactured in France and are type certificated for operation in the United States under the provision of section 21.29 of the Federal Aviation Regulations (14 CFR 21.29) and the applicable bilateral airworthiness agreement. Pursuant to this bilateral airworthiness agreement, the DGAC has kept the FAA informed of the situation described above. The FAA has examined the findings of the DGAC, reviewed all available information, and determined that AD action is necessary for products of this type design that are certificated for operations in the United States.

Since an unsafe condition has been identified that is likely to exist or develop on other Eurocopter France Model AS332C, L, and L1 and Model SA330F, G, and J helicopters of the same type designs, this AD requires performing a procedure to determine the play of the tail rotor gearbox, and repeating the procedure at certain intervals. The short compliance time involved is required because the previously described critical unsafe condition can adversely affect the controllability of the helicopter. Therefore, performing a procedure to determine the play of the tail rotor gearbox is required within 25 hours TIS and then repetitively at certain intervals, and this AD must be issued immediately.

This rule is issued under 49 U.S.C. Section 44701 pursuant to the authority delegated to me by the Administrator, and is effective immediately upon receipt of this priority letter.

98-06-04 EUROCOPTER FRANCE: Priority Letter issued on March 4, 1998. Docket No. 98-SW-11-AD.

Applicability: Model AS332C, L, and L1 and Model SA330F, G, and J helicopters, certificated in any category.

NOTE 1: This AD applies to each helicopter identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For helicopters that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must use the authority provided in paragraph (d) to request approval from the FAA. This approval may address either no action, if the current configuration eliminates the unsafe condition, or different actions necessary to address the unsafe condition described in this AD. Such a request should include an assessment of the effect of the changed configuration on the unsafe condition addressed by this AD. In no case does the presence of any modification, alteration, or repair remove any helicopter from the applicability of this AD.

Compliance: Required within the next 25 hours time-in-service (TIS) for tail rotor gearboxes (TGB) with 495 or more hours TIS since manufacture or overhaul; or, for TGB with less than 495 hours TIS since manufacture or overhaul, required upon or before attaining 520 hours TIS, unless accomplished previously.

To detect excessive play between the splines of the TGB bevel gear and the bevel wheel and to prevent failure of the TGB, which could result in loss of tail rotor drive and subsequent loss of control of the helicopter, accomplish the following:

(a) For TGB that are not equipped with a tail rotor blade deicing system as shown in Figure 1, fabricate a steel angle bracket (angle bracket) (No. 1 of Figure 1) and an aluminum mount (No. 2 of Figure 1).

(1) Place a tail rotor blade in the horizontal position with the blade's tip facing forward.

(2) Immobilize the TGB input flange by placing a wooden block between the TGB input flange and the deck.

(3) Secure the angle bracket on the TGB output casing with a nut (No. 3 of Figure 1) and a washer (No. 5 of Figure 1).

(4) Secure the mount on the rotor shaft.

(5) Secure the dial indicator gage (No. 4 of Figure 1) on the angle bracket.

(6) Install the feeler of the dial indicator on the mount at the index mark which is 120 mm from the rotor shaft center line.

(7) Using a dynamometer, apply a 1 daN (2.25 lbs.) load in both directions (indicated by letter "F" in Figure 1), 30 mm from the blade tip, to measure the total play.

(b) For TGB that are equipped with a tail rotor blade deicing system as shown in Figure 2, fabricate a steel angle bracket (angle bracket) (No. 6 of Figure 2) from a 90 degree formed steel sheet.

(1) Place a tail rotor blade in the horizontal position with the blade's tip facing forward.

(2) Immobilize the TGB input flange by placing a wooden block between the TGB input flange and the deck.

(3) Secure the angle bracket on the TGB output casing with a nut (No. 7 of Figure 2) and a washer (No. 8 of Figure 2).

(4) Secure the dial indicator gage (No. 9 of Figure 2) on the angle bracket.

(5) Install the feeler of the dial indicator on the tail rotor hub, 5 mm from the spindle attachment bolt (Item A of Figure 2).

(6) Using a dynamometer, apply a 1 daN (2.25 lbs.) load in both directions (indicated by letter "F" in Figure 1), 30 mm from the blade tip, to measure the total play.

(c) Record the play measurement on the equipment log card or equivalent record.

(1) If the play is 0.37 mm or less, comply with paragraphs (a) or (b) of this AD, as applicable, at intervals not to exceed 520 hours TIS.

(2) If the play is greater than 0.37 mm and less than 0.52 mm, comply with paragraphs (a) or (b) of this AD, as applicable, at intervals not to exceed 100 hours TIS.

(3) If the play is equal to or greater than 0.52 mm, remove the TGB and replace it with an airworthy TGB.

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Rotorcraft Standards Staff, FAA. Operators shall submit their requests through an FAA Principal Maintenance Inspector, who may concur or comment and then send it to the Manager, Rotorcraft Standards Staff.

NOTE 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Rotorcraft Standards Staff.

(e) Special flight permits will not be issued.

NOTE 3: The subject of this AD is addressed in Direction Generale De L'Aviation Civile (France) AD 97-322-067(AB) and AD 97-323-079(AB), both dated November 19, 1997.

(f) Priority Letter AD 98-06-04, issued March 4, 1998, becomes effective upon receipt.

FOR FURTHER INFORMATION CONTACT:

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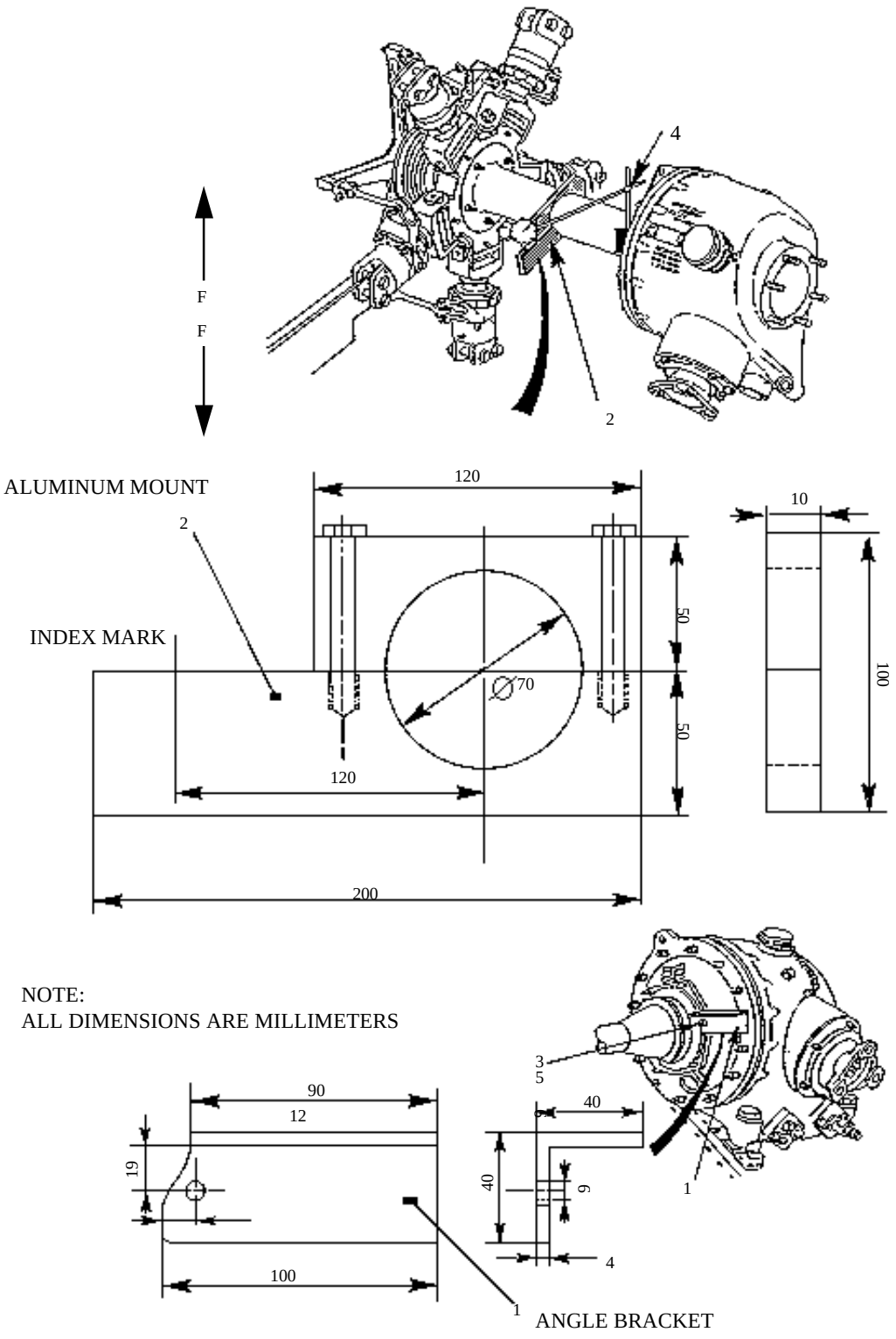
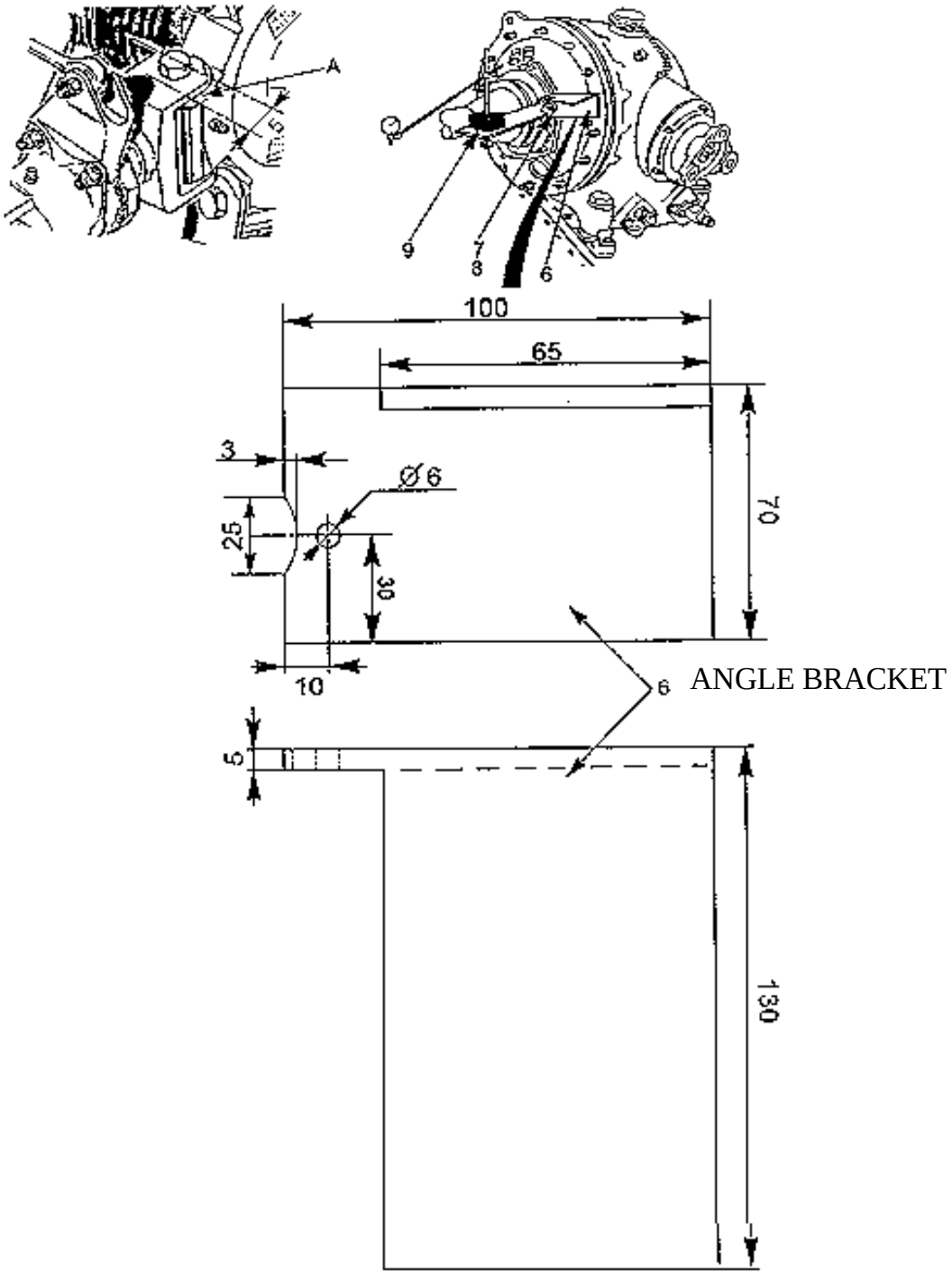

F
F
4
2
ALUMINUM MOUNT
120
10
2
INDEX MARK
50
50
100
70
120
200
NOTE:
ALL DIMENSIONS ARE MILLIMETERS
3
5
90
12
19
100
40
40
9
4
1
1
ANGLE BRACKET

FIGURE 1



NOTE:
ALL DIMENSIONS ARE MILLIMETERS

FIGURE 2